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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/993,621	11/27/2001	Koichiro Nagar	Q66977	8241

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SUGHRUE MION, PLLC
2100 PENNSYLVANIA AVENUE, N.W.
SUITE 800
WASHINGTON, DC 20037

EXAMINER

PUTTLITZ, KARL J

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/993,621

Applicant(s)

NAGAR ET AL

Examiner

Karl J. Puttlitz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9,10,13,14,16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-6,9,13,14,18 and 19 is/are allowed.
- 6) ☒ Claim(s) 10 is/are rejected.
- 7) ☒ Claim(s) 16 and 20-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

RD

DETAILED ACTION

The rejection under section 112, second paragraph is withdrawn in view of Applicant's amendments and remarks clarifying the claims.

The rejection under section 103 is maintained and repeated below. Applicant's remarks in connection with this ground of rejection are also addressed.

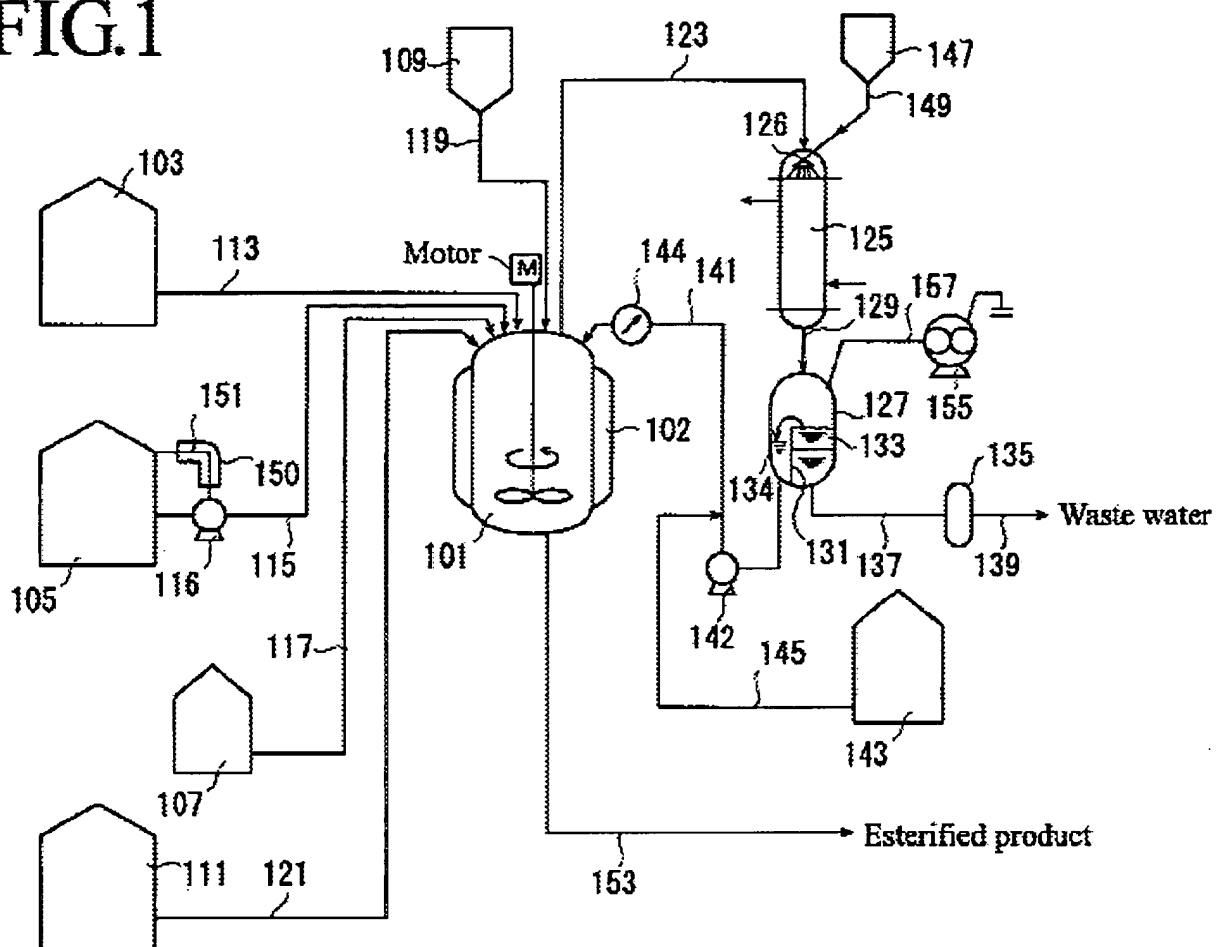
Claim Rejections - 35 USC § 103

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirata.

Hirata teaches a method for the production of an esterified product which comprises esterifying an alcohol with (meth)acrylic acid in a dehydrating solvent in the presence of an acid catalyst and a polymerization inhibitor. See description bridging columns 5 and 6.

Specifically, Hirata discloses an apparatus, as shown in FIG 1:

FIG. 1



which is "(an apparatus) for expelling by distillation a distillate containing reaction-forming water to be formed during the esterification reaction in a reaction system (a reaction tank 101), condensing and liquefying the distillate while preventing the occurrence of gel, separating and removing the reaction-forming water, and returning the rest of the distillate at the solvent circulating speed defined above (not less than 0.5 cycle/hour, preferably in the range of 1 to 100 cycles/hour), a circulation system is provided therein for condensing and liquefying by the action of a antigelling agent a distillate occurring as an azeotropic mixture of reaction-forming water and a

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dehydrating solvent, separating and removing the reaction-forming water (water phase) from the condensed and liquefied distillate, and refluxing the rest of the condensate (a solvent phase mainly containing the dehydrating solvent) back to the reaction tank 101 at the solvent circulating speed mentioned above. To be more specific, the upper part of the reaction tank 101 and the top part of the column of a vertical shell and tube type condenser 125 of the counterflow (or parallel flow) contact type are connected with a pipe 123. The lower bottom part of the condenser 125 and the upper part of a water separator 127 made of SUS are connected with a pipe 129. Inside the water separator 127, a partition plate 131 is formed." See paragraph bridging columns 19 and 20.

The difference between the process set forth in claim f and that disclosed by Hirata is that Hirata fails to explicitly state that the feed pipe has a gaseous phase section and a liquid phase section there within, and said feeding pipe having openings in the gaseous phase section and in the liquid phase section.

However, Those of ordinary skill would expect that the feed pipe has an inlet and an outlet (i.e. openings) and that some air or other gas would be in the pipe (i.e., gas and liquid phase sections). Therefore, given the broadest reasonable interpretation of the claims, these elements would be within the motivation of those of ordinary skill after a reading of Hirata.

Applicant has amended claim 10 to recite that the water separator is provided with a feeding pipe connected thereto from said reaction vessel. The examiner points to pipe 141 in Fig 1 of Hirata.

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Claim 10 has also been amended to recite that feeding pipe having openings in the gaseous phase section and in the liquid phase section of the water separator. As stated at column 21 of Hirata, lower portion 133 of water condenser 127 contains distillate which overflows to other portion 134 and thus enters pipe 141 en route to the reaction vessel. Those of ordinary skill would expect that at some portions of the time the opening of feed pipe 141, at the juncture with water condenser 127, would be in contact with a liquid (when there is overflow from other lower portion 133) and some portions of time when it would be in contact with the gaseous phase, i.e., when there is no overflow from lower portion 133. Therefore, a feeding pipe having openings in the gaseous phase section and in the liquid phase section of the water separator is contemplated by Hirata.

Allowable Subject Matter

Claims 1, 3-6, 9, 13, 14, 18 and 19 are allowed.

Claim Objections

Claims 16 and 20-22 are objected to for dependence on a rejected claims but would be allowable if rewritten in independent form including those limitations from intervening claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday to Friday from 9 a.m. to 5 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter, can be reached at telephone number (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karl J. Puttlitz
Assistant Examiner


ACTING FOR
Johann R. Richter, Ph.D., Esq.
Supervisory Patent Examiner
Biotechnology and Organic Chemistry
Art Unit 1621
(571) 272-0646